

LEGAL NOTICE No. 285

REPUBLIC OF TRINIDAD AND TOBAGO

THE CIVIL AVIATION ACT, CHAP. 49:03

REGULATIONS

MADE BY THE TRINIDAD AND TOBAGO CIVIL AVIATION AUTHORITY WITH
THE APPROVAL OF THE MINISTER UNDER SECTION 33 OF THE
CIVIL AVIATION ACT AND SUBJECT TO NEGATIVE RESOLUTION OF
PARLIAMENT

THE CIVIL AVIATION [(NO. 2) OPERATIONS] (AMENDMENT)
REGULATIONS, 2019

1. These Regulations may be cited as the Civil Aviation [(No. 2) Citation
Operations] (Amendment) Regulations, 2019.

2. In these Regulations “the Regulations” means the Civil Interpretation
Aviation [(No. 2) Operations] Regulations, 2004. Chap. 49:03

3. Regulation 2 of the Regulations is amended— Regulation 2
amended
(a) by inserting in the appropriate alphabetical sequence, the Definitions
following definitions:

“aircraft tracking” means a process, established by the operator, that maintains and updates, at standardised intervals, a ground-based record of the four dimensional position of individual aircraft in flight;

“air-ground control radio station” means an aeronautical telecommunications station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area;

“approach and landing phase-helicopters” means that part of the flight from 300m (1000 feet) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the balked landing point;

“appropriate ATS authority” means the relevant authority designated by the State responsible for providing air traffic services in the airspace concerned;

“continuous descent final approach” means a technique, consistent with stabilised approach procedures, for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent,

without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15m (50 feet) above the landing runway threshold or a point where the flare manoeuvre should begin for the type of aircraft flown;

“crew member” means a person assigned by an operator to duty on an aircraft during a flight duty period;

“cruise climb” means an aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases;

“detect and avoid” means the capability to see, sense or detect conflicting traffic or other hazards and take appropriate action;

“extended diversion time operations (EDTO)” means any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the State of the operator;

“EDTO critical fuel” means the fuel quantity necessary to fly to an en-route alternate aerodrome considering, at the most critical point on the route, the most limiting system failure;

“EDTO significant system” means an aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion;

“en-route phase” means that part of the flight from the end of the take-off and initial climb phase to the commencement of the approach and landing phase;

“extended flight over water” means a flight operated over water at a distance of more than 93 km (50 NM), or 30 minutes at normal cruising speed, whichever is the lesser, away from land suitable for making an emergency landing;

“fatigue” means a physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase and/or workload (mental and/or physical activity) that can impair a person’s alertness and ability to perform safety-related operational duties;

“fatigue risk management system (FRMS)” means a data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness;

“heliport operating minima” means the limits of usability of a heliport for—

- (a) take-off, expressed in terms of runway visual range or visibility and, if necessary, cloud conditions;
- (b) landing in 2D instrument approach operations, expressed in terms of visibility or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and
- (c) landing in 3D instrument approach operations, expressed in terms of visibility or runway visual range and decision altitude/height (DA/H) as appropriate to the type or category of the operation;

“incompatible” means describing dangerous goods which, if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance;

“maximum diversion time” means maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome;

“maximum mass” means maximum certified take-off mass;

“operation” means an activity or group of activities which are subject to the same or similar hazards and which require a set of equipment to be specified, or the achievement and maintenance of a set of pilot competencies, to eliminate or mitigate the risk of such hazards;

“operating base” means the location from which operational control is exercised, and it is normally the location where personnel involved in the operation of the aircraft work and the records associated with the operation are located and has a degree of permanency beyond that of a regular point of call;

“safety-sensitive personnel” means persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers;

“synthetic vision system (SVS)” means a system to display data-derived synthetic images of the external scene from the perspective of the flight deck;

“take-off and initial climb phase” means that part of a flight of a helicopter operating in performance Class 1 from the start of take-off to 300m (1000 feet) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases;

“threshold time” means the range, expressed in time, established by the State of the Operator to an en-route alternate aerodrome, whereby any time beyond requires an EDTO approval from the State of the Operator; and

“VTOSS” means the minimum speed of a helicopter operating in performance Class 1 at which climb shall be achieved with the critical engine inoperative, the remaining engines operating within approved operating limits;

(b) by deleting the definition of “aerobatic flight” and substituting the following definition:

“ “acrobatic flight” means manoeuvres intentionally performed by an aircraft involving an abrupt change in its altitude, an abnormal altitude or an abnormal variation in speed;”;

(c) by deleting the definition of “aircraft” and substituting the following definition:

“ “aircraft” means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface;”;

(d) by deleting the definition of “cabin crew” and substituting the following definition:

“ “cabin crew member” means a crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft but who shall not act as a flight crew member;”;

- (e) in the definition of “crew”, by deleting the words “any member of”;
- (f) by deleting the definition of “duty” and substituting the following definition:
 - “ “duty” means any task that flight or cabin crew members are required by the operator to perform including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue;”;
- (g) in the definition of “enhanced vision systems (EVS)”, by inserting after the word “sensors” the words “but EVS does not include night vision imaging systems (NVIS)”;
- (h) in the definition of “flight crew”, by deleting the words “those members of”;
- (i) by deleting the definition of “flight plan” and substituting the following definition:
 - “ “flight plan” means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;”;
- (j) by renaming the definition of “flight time” as “flight time-aeroplanes”;
- (k) in the definition of “flight time-aeroplanes”, by inserting after the words “end of the flight” the words “and is synonymous with the term “block to block” time or “chock to chock” time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight”;
- (l) in the definition of “heading”, by inserting after the words “degrees from North”, the words “(true, magnetic, compass or grid)”;
- (m) by deleting the definition of “master minimum equipment list” and substituting the following definition:
 - “ “master minimum equipment list (MMEL)” means a list established for a particular aircraft type by the organisation responsible for the type design with the approval of the State of Design containing items, one of more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures;”;

- (n) by deleting the definition of “minimum descent altitude or minimum descent height” and substituting the following definition:
 - “ “minimum descent altitude (MDA) or minimum descent height (MDH)” means a specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference;”;
- (o) in the definition of “operator”, in paragraph (a) by—
 - (i) deleting the words “a person, organisation or enterprise” and substituting the words “the person, organisation or enterprise”; and
 - (ii) inserting after paragraph (b), the following paragraph:
 - “(c) in the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.”;
- (p) by deleting the definition of “required communication performance” and substituting the following definition:
 - “ “required communication performance (RCP) specification” means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication;”;
- (q) by deleting the definition of “rest period” and substituting the following definition:
 - “ “rest period” means a continuous and defined period of time, subsequent to, or prior to duty, during which flight or cabin crew members are free of all duties;”;
- (r) by deleting the definition of “State of Origin” and substituting the following definition:
 - “ “State of Origin” means the State in which dangerous goods consignment is first to be loaded on an aircraft;”;
 - and
- (s) in the definition of “take-off decision point”, by deleting the words “a power-unit” and substituting the words “an engine”.

Regulation 9
amended

4. Regulation 9 of the Regulations is amended in subregulation (1), by deleting the words “there is available in such aircraft-” and substituting the words “such aircraft shall carry on board”.

5. Regulation 11B is amended by inserting after subregulation (1),^{Regulation 11B amended}
the following subregulations:

“(1A) The Director-General shall recommend that the Authority establish inspection, surveillance and enforcement procedures for all entities performing any function prescribed in these regulations for air transport of dangerous goods with a view to achieving compliance with those regulations.

(1B) The procedures referred to under subregulation (1A) would include provisions for—

- (i) inspecting dangerous goods consignments prepared, offered, accepted or transported by the entities referred to in 11B(2);
- (ii) inspecting the practices of the entities referred to in 11B(2); and
- (iii) investigating alleged violations.”.

6. Regulation 11S of the Regulations is amended—

^{Regulation 11S amended}

- (a) in subregulation (1), by deleting the words “regulation 16(2)” and substituting the words “subregulation 11E(2)”;
- (b) in subregulation (3), by deleting the words “regulation 20(2)” and substituting the words “subregulation 11I(2)”; and
- (c) in subregulation (5), by deleting the words “regulation 22(2)” and substituting the words “subregulation 11K(2)”.

7. Regulation 28 of the Regulations is amended—

^{Regulation 28 amended}

- (a) in paragraph (e), by deleting the word “and” at the end of the paragraph;
- (b) in paragraph (f), by deleting the words “prescribed methods” and substituting the words “paragraph (g); and”
- (c) by inserting after paragraph (f), the following paragraph:
 - “(g) ensure that the Certificate of Release to Service shall contain—
 - (i) basic details of the maintenance carried out, including detailed reference of the approved data used;
 - (ii) the date such maintenance was completed;

- (iii) the identity of the authorized person or persons signing the release;
- (iv) where applicable, the identity of the approved maintenance organisation; and
- (v) an airworthiness compliance statement.”.

Regulation 45 amended

8. Regulation 45 is amended—

- (a) by renumbering Regulation 45 as 45(1); and
- (b) by inserting after subregulation (1), the following subregulation:
 - “ (2) The pilot in command shall not conduct operations for which a specific approval is required unless such approval has been issued by the State of Registry.”.

Regulation 47 revoked and substituted

9. The Regulations are amended by revoking regulation 47 and substituting the following regulation:

“Powers of the pilot in command

47. (1) The pilot in command shall have responsibility for operational control.

(2) The pilot in command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his or her duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto.

(3) The pilot in command shall ensure that other members of the flight crew are familiar with such of these laws referred to in subregulation (2), regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aircraft.

(4) The pilot in command shall take all necessary measures to ensure that all persons carried in the aircraft obey all reasonable commands given by the pilot in command for the purpose of securing the safety of the aircraft and of persons or property carried therein.”.

Regulation 48 amended

10. Regulation 48 of the Regulations is amended, in subregulation (1) by deleting the words “the States in which the aircraft is operated” and substituting the words “those States in which operations are conducted”.

11. Regulation 61 of the Regulations is amended— Regulation 61 amended
- (a) in subregulation (3), by inserting after the word “emergency” the words “in accordance with the standards set out under Schedule 12”; and
- (b) by inserting after subregulation (3), the following subregulation:
- “ (4) A pilot in command shall advise ATC of any minimum fuel state that may result in landing with less than the planned final reserve fuel in accordance with the standards set out under Schedule 12.”
12. The Regulations are amended, by inserting after regulation 74, Regulation 74A inserted
the following regulation:
- “ 74A. A pilot in command shall report the runway braking action special air-report (AIREP) when the runway braking action encountered is not as good as reported.”
13. Regulation 75 of the Regulations is amended by inserting after Regulation 75 amended
subregulation (3), the following subregulation:
- “ (4) In the event the aeroplane becomes involved in an accident or incident, the operator shall ensure, to the extent possible, the preservation of all related flight recorder records and, if necessary, the associated flight recorders, and their retention in safe custody pending their disposition.”
14. Regulation 85 of the Regulations is amended, by revoking Regulation 85 amended
subregulation (1) and substituting the following subregulation:
- “ (1) The operator shall ensure that a flight will not be commenced unless it has been ascertained, by every reasonable means available, that the ground and/or water areas, aerodrome and communication facilities and navigational aids, available and directly required on such flight for the safe operation of the aircraft and the protection of the passengers, are adequate for the type of operation under which the flight is to be conducted and are adequately operated for this purpose.”
15. Regulation 88 of the Regulations is amended— Regulation 88 amended
- (a) in subregulation (1)—
- (i) in the chapeau, by deleting the words “aerodrome of intended landing” and substituting the words “destination aerodrome, heliport or landing location”; and

(ii) in paragraph (b), by inserting after the word “aerodrome” the words “, heliport or landing location.”; and

(b) by inserting after subregulation (2) the following subregulation:

“ (3) To ensure that an adequate margin of safety is observed in determining whether or not an approach and landing can be safely carried out at each alternate aerodrome, heliport or landing location, the operator shall specify appropriate incremental values for height of cloud base and visibility, acceptable to the Authority, to be added to the operator’s established aerodrome, heliport or landing location operating minima.”.

Regulation 89
amended

16. Regulation 89 of the Regulations is amended—

(a) in subregulation (1)(c), by deleting the words “suitable” and “aerodrome”; and

(b) by inserting after subregulation (3), the following subregulation:

“ (4) For the requirements set out in subregulation (1)(c) where a heliport is selected as a destination alternate, the available information shall indicate that, at the estimated time of use, the conditions will be at or above the heliport operating minima for that operation.”.

Regulation 91
amended

17. Regulation 91 of the Regulations is amended by inserting after subregulation (2), the following subregulation:

“ (3) Where an offshore alternate heliport is specified, it shall be specified subject to—

(a) the offshore alternate heliport shall be used only after a point of no return (PNR) and prior to a PNR, onshore alternate heliports shall be used;

(b) mechanical reliability of critical control systems and critical components shall be considered and taken into account when determining the suitability of the alternate heliport(s);

(c) one engine inoperative performance capability shall be attainable prior to arrival at the alternate heliport;

(d) to the extent possible, deck availability shall be guaranteed; and

(e) weather information shall be reliable and accurate.”.

18. Regulation 96 of the Regulations is amended—

Regulation 96
amended

(a) in subregulation (4A) by—

(i) deleting the word “suitable”; and

(ii) inserting after the word “alternate”, the words “heliport or landing location”; and

(b) by inserting after subregulation (8), the following subregulation:

“ (9) The use of fuel after flight commencement for purposes other than originally intended during pre-flight planning shall require a re-analysis and, if applicable, adjustment of the planned operation.”.

19. Regulation 98 of the Regulations is amended in sub-regulation (1)—

Regulation 98
amended

(a) by deleting paragraph (b) and substituting the following paragraph:

“(b) fly from that aerodrome, heliport or landing location to and execute an approach, and a missed approach, at the alternate aerodrome, heliport or landing location to which the flight is planned, where required, and thereafter; and”;

(b) in subparagraph (c)(ii), by inserting after the word “aerodrome”, the words “heliport or landing location,”.

20. Regulation 106 of the Regulations is amended by inserting after subregulation (1), the following subregulation:

Regulation
106 amended

“ (1A) In applying the standards of aircraft performance, an operator shall take into account all factors that significantly affect the performance of the aircraft, including but not limited to: the mass of the aircraft, the operating procedures, the pressure-altitude appropriate to the elevation of the aerodrome, the runway slope, the ambient temperature, the wind and surface conditions of the runway at the expected time of use, i.e. presence of water, snow, slush and/or ice and such

factors shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which may be provided in the scheduling of performance data or in the comprehensive and detailed code of performance in accordance with which the aircraft is being operated.”.

Regulation 118 amended 21. Regulation 118 of the Regulations is amended by inserting after subregulation (1), the following subregulations:

“ (1)(A) An approach to land shall not be continued below three hundred metres (one thousand feet) above aerodrome elevation unless the pilot in command is satisfied that, with the runway surface condition information available, the aeroplane performance information indicates that a safe landing can be made.

(1)(B) A pilot in command shall ensure that, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, the aeroplane shall be able to land, with assurance that it can stop within the landing distance available given that allowances shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.”.

Regulation 151A inserted 22. The Regulations are amended by inserting after regulation 151, the following regulation:

“ADHERENCE TO FLIGHT PLAN

Adherence to flight plan

151A. A pilot in command shall adhere to the current flight plan or the applicable portion of a current flight plan for a controlled flight unless a request for a change has been made and clearance obtained from the appropriate Air Traffic Services Unit or unless an emergency situation arises which necessitates immediate action by the pilot in command, in which event, as soon as circumstances permit, after such emergency authority is exercised, the appropriate Air Traffic Services Unit shall be notified of the action taken and that this action has been taken under emergency authority.”.

23. Regulation 153 of the Regulations is amended in sub-regulation (4) by deleting the words “Where an Automatic Dependent Surveillance agreement is in place,” and substituting the words “Where ADS-C services are provided and ADS-C is activated,”. Regulation
153 amended

24. The Regulations are amended, by revoking regulation 154 and substituting the following regulation: Regulation
154 amended

“DEVIATIONS FROM THE CURRENT FLIGHT PLAN

Deviation from
current flight
plan 154. In the event that a controlled flight deviates from its current flight plan, the pilot in command shall—

- (a) where the aircraft is off track, adjust the heading of the aircraft to regain track as soon as practicable;
- (b) where the sustained Mach number/true airspeed at cruising level varies by plus or minus Mach 0.02 or more, or plus or minus 19km/h (10kt) true airspeed or more from the current flight plan, inform the appropriate Air Traffic Services Unit; or
- (c) except where ADS-C is activated and serviceable in airspace where ADS-C services are provided, where the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, changes in excess—
 - (i) of two minutes from that previously notified to Air Traffic Services Unit; or
 - (ii) such other period of time as is prescribed by the appropriate Air Traffic Control Authority or on the basis of regional air navigation agreements,

notify, as soon as possible, the appropriate Air Traffic Services Unit.”.

Regulation
155 amended

25. Regulation 155 of the Regulations is amended—

(a) by deleting the words “Intended Changes” in the title of Regulation 155, and substituting the words “Change Requests”.

(b) by revoking paragraph (b), and substituting the following paragraphs:

“(b) in respect of a change in cruising level, the requested new cruising level and cruising Mach number/true airspeed at this level and revised time estimates, when applicable, at subsequent reporting points or flight information region boundaries;

(ba) in respect of a change in Mach number/true airspeed, the requested Mach number/true airspeed;”

Regulation
160B inserted

26. The Regulations are amended by inserting after regulation 160A, the following regulation:

“LOCATION OF AEROPLANE IN DISTRESS

Locating
aeroplane in
distress

160B. (1) An operator of an aeroplane of a maximum certificated take-off mass of over twenty seven thousand kilogrammes for which the individual certificate of airworthiness is first issued after 31st December 2020, shall ensure such aeroplane autonomously transmit information from which a position can be determined by the operator at least once every minute, when in distress, in accordance with the standards set out under Schedule 7A and ICAO Annex 6 Part I, Appendix 9.

(2) The operator shall make position information of a flight in distress available to the Authority and other appropriate organisations, as established for performing search and rescue operations.”.

Regulation
180 amended

27. The Regulations are amended by revoking regulation 180 and substituting the following regulation:

“Continuation
of Instrument
Flight Rules
flight toward a
destination

180. A pilot shall not continue an Instrument Flight Rules flight toward an aerodrome or heliport of intended landing unless the latest available information, meteorological or otherwise,

indicates that the conditions at that aerodrome or heliport, or at least one destination alternate aerodrome, heliport or landing location will, at the expected time of arrival, be at or above the specified or required instrument approach minima.”.

28. Regulation 183 of the Regulations is amended in sub-regulation (1) by inserting after the word “aerodrome,” the words “heliport or landing location,”. Regulation
183 amended

29. Regulation 193 of the Regulations is amended by— Regulation
193 amended

- (a) renumbering regulation 193 as subregulation 193(1); and
- (b) inserting after subregulation (1), as renumbered, the following subregulation:

“ (2) For commercial air transport operations, the operator shall ensure that in an emergency during flight passengers are instructed in such emergency as may be appropriate to the circumstances.”.

30. Regulation 256 of the Regulations is amended— Regulation
256 amended

- (a) in subregulation (5), by—
 - (i) inserting after the words “on a route”, the words “or within an area specified by the operator and approved by the Authority”; and
 - (ii) deleting the words “crew compartment” and substituting with word “deck”; and

(b) by inserting after subregulation (7), the following subregulations:

“ (8) The national air operator shall not continue to utilize a pilot as a pilot in command of an helicopter on an operation in an area specified by the national air operator and approved by the Authority unless, within the preceding twelve months, the pilot has made at least one representative flight as a pilot member of the flight crew, or as a check pilot, or as an observer on the flight deck.

(9) Where, in the event that more than twelve months have elapsed where a pilot has not made such a representative flight under subregulation (8), that pilot must requalify in accordance with this regulation, prior to again serving as a pilot in command on that operation.”

Regulation
276 amended

31. Regulation 276 of the Regulations is amended in subregulation (2) by deleting the definition of “fatigue” and substituting the following definition:

“ “fatigue” means a physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, or workload (mental or physical activity) that can impair a person’s alertness and ability to perform safety-related operational duties;”

Regulation
290A
inserted

32. The Regulations is amended by inserting after Regulation 290, the following regulation:

“FATIGUE RISK MANAGEMENT SYSTEM (FRMS)

Implementation
of a Fatigue
Risk
Management
System

290A. (1) A national air operator shall implement a Fatigue Risk Management System to manage fatigue-related safety risks which, for a minimum, shall—

- (a) incorporate scientific principles and knowledge within the FRMS;
- (b) identify fatigue-related safety hazards and the resulting risks on an ongoing basis;
- (c) ensure that remedial actions, necessary to effectively mitigate the risks associated with the hazards, are implemented promptly;
- (d) provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions;

- (e) provide for continuous improvement to the overall performance of the FRMS; and
- (f) be in a manner set out in Schedule 10A, as applicable to all operations.

(2) A national air operator shall establish maximum values for flight times and/or flight duty periods(s) and duty period(s), and minimum values for rest periods. These values shall be based on scientific principles and knowledge, subject to safety assurances processes acceptable to the Authority.

(3) The Director-General shall recommend that the Authority—

- (a) approve the FRMS submitted by national air operators;
- (b) mandate a decrease in maximum values and an increase in minimum values, in the event that the FRMS data indicates that these values are too high or too low, respectively; and
- (c) approve any increase in maximum values or decrease in minimum values, only after evaluating the submitted justification for such changes, based on accumulated FRMS experience and fatigue-related data.

(4) A national air operator may integrate its FRMS with its Safety Management System (SMS).”.

33. Regulation 294 of the Regulations is amended, in sub-regulation (2) by —

Regulation
294
amended

- (a) deleting the word “and” at the end of paragraph (c);
- (b) inserting the word “and” at the end of paragraph (d); and
- (c) inserting after paragraph (d), the following paragraph:
 - “(e) notify the appropriate air traffic services unit when the position of the aircraft cannot be determined by an aircraft tracking capability, and attempts to establish communications are unsuccessful.”.

Schedule 7A
inserted

34. The Regulations are amended by inserting after Schedule 7, the following Schedule:

“SCHEDULE 7A

[Regulation 160(B)]

LOCATION OF AEROPLANE IN DISTRESS

1. PURPOSE AND SCOPE

Location of an aeroplane in distress aims at establishing, to a reasonable extent, the location of an accident site within a 6NM radius.

2. OPERATION

- a. An aeroplane in distress shall automatically activate the transmission of information from which its position can be determined by the operator and the position information shall contain a time stamp. It shall also be possible for this transmission to be activated manually. The system used for the autonomous transmission of position information shall be capable of transmitting that information in the event of aircraft electrical power loss, at least for the expected duration of the entire flight.
- b. An aircraft is in distress condition when it is in a state that, if the aircraft behavior is left uncorrected, can result in an accident. This will provide a high probability of locating an accident site to within a 6 NM radius. The operator shall be alerted when an aircraft is in a distress condition with an acceptable low rate of false alerts. In case of a triggered transmission system, initial transmission of position information shall commence immediately or no later than five seconds after the detection of the activation event.

Note 1.—Aircraft behaviour events can include, but are not limited to, unusual attitudes, unusual speed conditions, collision with terrain and total loss of thrust/propulsion on all engines and ground proximity warnings.

Note 2.—A distress alert can be triggered using criteria that may vary as a result of aircraft position and phase of flight. Further guidance regarding in-flight event detection and triggering criteria may be found in the EUROCAE ED-237, Minimum Aviation System Performance Specification (MASPS) for Criteria to Detect In-Flight Aircraft Distress Events to Trigger Transmission of Flight Information.

- c. When an aircraft operator or an air traffic service unit (ATSU) has reason to believe that an aircraft is in distress, coordination shall be established between the ASTU and the aircraft operator.

- d. The State of the Operator shall identify the organisations that will require the position information of an aircraft in an emergency phase. These shall include, as a minimum—
- (a) air traffic service unit(s) (ATSU); and
 - (b) SAR rescue coordination centre(s) (RCC) and sub-centres.

Note 1.—Refer to ICAO Annex 11 for emergency phase criteria.

Note 2.—Refer to ICAO Annex 12 for required notifications in the event of an emergency phase.

- e. When autonomous transmission of position information has been activated, it shall only be able to be deactivated using the same mechanism that activated it.
- f. The accuracy of position information shall, as a minimum, meet the position accuracy requirements established for ELTs.”.

35. The Regulations are amended in Schedule 9, Part Q— Schedule 9
Part Q
amended
- (a) in paragraph 1(f), by deleting the word “aeroplane” and substituting the word “aircraft”;
 - (b) in clause 2, by deleting the word “aeroplane” and substituting the word “aircraft”; and
 - (c) in clause 3, by deleting the word “aeroplane” and substituting the word “aircraft”.

36. The Regulations are amended by inserting after Schedule 10, Schedule 10A
inserted the following schedule:

“SCHEDULE 10A

[Regulation 290(A)]

FATIGUE RISK MANAGEMENT SYSTEM REQUIREMENTS

Guidance on the development and implementation of FRMS is contained in the Manual for the Oversight of Fatigue Management Approaches (Doc 9966).

A Fatigue Risk Management System (FRMS) shall contain as a minimum—

1. FRMS POLICY AND DOCUMENTATION

1.1 FRMS Policy

- 1.1.1 The operator shall define its FRMS policy, with all elements of the FRMS clearly identified.
- 1.1.2 The policy shall require the scope of FRMS operations be clearly defined in the operations manual.

1.1.3 The policy shall—

- (a) reflect the shared responsibility of management, flight and cabin crews, and other involved personnel;
- (b) clearly state the safety objectives of the FRMS;
- (c) be signed by accountable executive of the organisation;
- (d) be communicated, with visible endorsement, to all the relevant areas and levels of the organisation;
- (e) declare management's commitment to effective safety reporting;
- (f) declare management's commitment to the provision of adequate resources for the FRMS;
- (g) declare management's commitment to the continuous improvement of the FRMS;
- (h) require that clear lines of accountability for management, flight and cabin crews, and all other involved personnel are identified; and
- (i) require periodic reviews to ensure that it remains relevant and appropriate.

Note: Effective safety reporting is described in the Safety Management Manual (SMM) (Doc 9859).

1.2 FRMS Documentation

The operator shall develop and keep current FRMS documentation that describes and records—

- (a) FRMS policy and objectives;
- (b) FRMS processes and procedures;
- (c) accountabilities, responsibilities and authorities for these processes and procedures;
- (d) mechanisms for ongoing involvement of management, flight and cabin crew members, and all other involved personnel;
- (e) FRMS training programmes, training requirements and attendance records;
- (f) Scheduled and actual flight times, duty periods and rest periods with significant deviations and reasons for deviations noted; and
- (g) FRMS outputs including findings from collected data, recommendations, and actions taken.

2. FATIGUE RISK MANAGEMENT PROCESSES

2.1 Identification of Hazards

The operator shall develop and maintain three fundamental and documented processes for fatigue hazard identification—

2.1.1 *Predictive*

The predictive process shall identify fatigue hazards by examining crew scheduling and taking into account factors known to affect sleep and fatigue and their effects on performance. Methods of examination may include but are not limited to—

- (a) operator or industry operational experience and data collected on similar types of operations;
- (b) evidence-based scheduling practices; and
- (c) bio-mathematical models.

2.1.2 *Proactive*

The proactive process shall identify fatigue hazards within current flight operations. Methods of examination may include but are not limited to—

- (a) self-reporting of fatigue risks;
- (b) crew fatigue surveys;
- (c) relevant flight and cabin crew performance data;
- (d) available safety databases and scientific studies; and
- (e) analysis of planned versus actual time worked.

2.1.3 *Reactive*

The reactive process shall identify the contribution of fatigue hazards to reports and events associated with potential negative safety consequences in order to determine how the impact of fatigue could have been minimized. At a minimum, the process may be triggered by any of the following:

- (a) *fatigue reports*;
- (b) confidential reports;
- (c) audit reports;
- (d) incidents; and
- (e) flight data analysis events.

2.2 Risk Assessment

2.2.1 The operator shall develop and implement risk assessment procedures that determine the probability and potential severity of fatigue-related events and identify when the risks require mitigation.

2.2.2 The risk assessment procedures shall review identified hazards and link them to—

- (a) operational processes;
- (b) their probability;
- (c) possible consequences; and
- (d) the effectiveness of existing safety barriers and controls.

2.3 Risk Mitigation

The operator shall develop and implement risk mitigation procedures that—

- (a) select the appropriate mitigation strategies;
- (b) implement the mitigation strategies; and
- (c) monitor the strategies' implementation and effectiveness.

3. FRMS SAFETY ASSURANCE PROCESSES

The operator shall develop and maintain FRMS safety assurance processes to—

- (a) provide for continuous FRMS performance monitoring, analysis of trends, and measurement to validate the effectiveness of the fatigue safety risk controls. The sources of data may include, but are not limited to—
 - (1) hazard reporting and investigations;
 - (2) audits and surveys; and
 - (3) reviews and fatigue studies;
- (b) provide a formal process for the management of change which shall include, but is not limited to—
 - (1) identification of changes in the operational environment that may affect FRMS;
 - (2) identification of changes within the organisation that may affect FRMS; and
 - (3) consideration of available tools which could be used to maintain or improve FRMS performance prior to implementing changes; and
- (c) provide for the continuous improvement of the FRMS. This shall include, but is not limited to—
 - (1) the elimination and/or modification of risk controls that have had unintended consequences or that are no longer needed due to changes in the operational or organisational environment;

- (2) routine evaluation of facilities, equipment, documentation and procedures; and
- (3) the determination of the need to introduce new processes and procedures to mitigate emerging fatigue-related risks.

4. FRMS PROMOTION PROCESSES

FRMS promotion processes support the ongoing development of the FRMS, the continuous improvement of its overall performance, and attainment of optimum safety levels. The following shall be established and implemented by the operator as part of its FRMS:

- (a) training programmes to ensure competency commensurate with the roles and responsibilities of management, flight and cabin crew, and all other involved personnel under the planned FRMS; and
- (b) an effective FRMS communication plan that—
 - (i) explains FRMS policies, procedures and responsibilities to all relevant stakeholders; and
 - (ii) describes communication channels used to gather and disseminate FRMS-related information.”.

37. The Regulations are amended, in Schedule 12 —

Schedule 12
amended

- (a) in Regulation 12, by—
 - (i) deleting the title “Regulation 12” and substituting the new title “Regulation 11B”; and
 - (ii) deleting the words “regulation 12” in the chapeau and substituting the words “regulation 11B”;
- (b) in Regulation 13, by—
 - (i) deleting the title “Regulation 13” and substituting the new title “Regulation 11D”;
 - (ii) deleting the words “regulation 13” in the chapeau and substituting the words “regulation 11D”;
- (c) by inserting after paragraph (b) of newly titled Regulation 11D, the following new paragraph (c) as follows:
 - “(c) The classification of goods as dangerous goods under regulation 11D shall meet the applicable minimum standards of the International Civil Aviation Organization Technical Instructions as amended.”.

- (d) by deleting the title “Regulation 15” and the entire paragraph of old regulation 15.
- (e) in Regulation 16, by—
 - (i) deleting the title “Regulation 16” and substituting the new title “Regulation 11H”; and
 - (ii) deleting the words “regulation 16” in the paragraph under defunct Regulation 16 and substituting with the words “regulation 11H”;
- (f) in Regulation 17 by—
 - (i) deleting the title “Regulation 17”; and
 - (ii) deleting the words “regulation 17” in the paragraph under the defunct Regulation 17 and substituting with the words “regulation 11H”;
- (g) in Regulation 18 by—
 - (i) deleting the title “Regulation 18” and substituting with the new title “Regulation 11J”; and
 - (ii) deleting the words “regulation 18” in the paragraph under defunct Regulation 18 and substituting with the words “regulation 11J”;
- (h) in Regulation 19, by—
 - (i) deleting the title “Regulation 19” and substituting the new title “Regulation 11F”; and
 - (ii) deleting the words “regulation 19” in the paragraph under defunct Regulation 19 and substituting with the words “regulation 11F”;
- (i) in Regulation 20, by—
 - (i) deleting the title of “Regulation 20”; and
 - (ii) deleting the words “regulation 20” in the paragraph under the defunct Regulation 20 and substituting with the words “regulation 11F”;
- (j) in Regulation 21, by—
 - (i) deleting the title of “Regulation 21”; and
 - (ii) deleting the words “regulation 21” in the paragraph under the defunct Regulation 21 and substituting the words “regulation 11F”;

(k) in Regulation 22, by—

- (i) deleting the title of “Regulation 22”; and
- (ii) deleting the words “regulation 22” in the paragraph under the defunct Regulation 22 and substituting the words “regulation 11F”;

(l) in Regulation 23, by—

- (i) deleting the title “Regulation 23” and substituting the new title “Regulations 11M to 11R”; and
- (ii) deleting the words “regulation 23” in the paragraph under defunct Regulation 23 and substituting with the words “regulations 11M to 11R”;

(m) in Regulation 24, by—

- (i) deleting the title “Regulation 24” and substituting the new title “Regulation 11S”; and
- (ii) deleting the words “regulation 24” in the paragraph under defunct Regulation 24 and substituting with the words “regulation 11S”;

(n) in Regulation 25, by—

- (i) deleting the title “Regulation 25” and substituting the new title “Regulation 11T”; and
- (ii) deleting the words “regulation 25” in the paragraph under defunct Regulation 25 and substituting the words “regulation 11T”;

(o) in Regulation 61, by inserting after paragraph (b)(ii), the following paragraphs:

“(c) in-flight fuel situation declaration—

- (i) a pilot in command shall declare a situation of fuel emergency by broadcasting “MAYDAY MAYDAY MAYDAY FUEL” when the calculated usable fuel predicted to be available upon landing at the nearest aerodrome, heliport or landing location where a safe landing can be made is less than the planned final reserve fuel.

Note 1: For aeroplanes, the planned final reserve fuel refers to the minimum amount of fuel required upon landing at any aerodrome. The final reserve fuel shall be the amount of fuel calculated

using the estimated mass on arrival at the destination alternate aerodrome, or the destination aerodrome when no destination alternate aerodrome is required—

- (a) for a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes, under the specified speed and altitude conditions; or
- (b) for a turbine-engine aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 1,500 feet above aerodrome elevation in standard conditions.

Note 2: For helicopters, the planned final reserve fuel refers to the minimum amount of fuel required upon landing at any landing site. The pilot estimates, with reasonable certainty, that the fuel remaining upon landing at the nearest safe landing site will be less than the final reserve fuel taking into consideration the latest information available to the pilot, the area to be overflown (i.e. with respect to the availability of precautionary landing areas, meteorological conditions and other reasonable contingencies).

- (ii) a pilot in command shall advise ATC of a minimum fuel state by declaring “MINIMUM FUEL” when, having committed to land at a specific aerodrome, heliport or landing location, the pilot calculates that any change to the existing clearance to that aerodrome, heliport or landing location, or other traffic delays, may result in landing with less than the planned final reserve.

Note 1: For aeroplanes, the declaration of “MINIMUM FUEL” informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing and any change to the existing clearance, or air traffic delays, may result in landing with less than the planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

Note 2: For helicopters, the declaration of “MINIMUM FUEL” informs ATC that all planned landing site options have been reduced to a specific landing site of intended landing, that no precautionary landing site is available, and any change to the existing clearance, or air traffic delays, may result in landing with less than the planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

(d) A pilot in command shall request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome with less than the final reserve fuel plus any fuel required to proceed to an alternate aerodrome or the fuel required to operate to an isolated aerodrome.”; and

(p) in Regulation 106, by deleting paragraph (b) and substituting the following paragraph:

“(b) Joint Airworthiness Agency (JAA)/European Aviation Safety Agency (EASA);”.

Made by the Trinidad and Tobago Civil Aviation Authority this 14th day of August, 2019.

F. REGIS
*Trinidad and Tobago
Civil Aviation Authority*

Approved by the Minister of Works and Transport this 16th day of August, 2019.

R. SINANAN
Minister of Works and Transport